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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/805,925	03/15/2001	Tatsuya Kunikiyo	204720US2	2893

22850 7590 09/13/2002

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EXAMINER

BETTENDORF, JUSTIN P

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 09/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicant(s)

09/805,925

Applicant(s)

KUNIKIYO, TATSUYA

Examiner

Justin P. Bettendorf

Art Unit

2817

-- The MAILING DATE of this communication appears on the cover sheet with the corresponding address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) 2-5, 7-10 and 12-15 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 6 and 11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-15 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3 6) ☐ Other:

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## DETAILED ACTION

### *Election/Restrictions*

1. Applicant's election with traverse of Species I in Paper No. 5 is acknowledged. The traversal is on the ground(s) that no basis for support of the restriction requirement as required in MPEP 816. This is not found persuasive because the procedure outlined in MPEP 809.02(a) was followed. Moreover, MPEP 808.01(a) states:

“Where there is no disclosure of relationship between species (see MPEP § 806.04(b)), they are independent inventions and election of one invention following a requirement for restriction is mandatory even though applicant disagrees with the examiner. There must be a patentable difference between the species as claimed. See MPEP § 806.04(h). **Since the claims are directed to independent inventions, restriction is proper pursuant to 35U.S.C. 121, and it is not necessary to show a separate status in the art or separate classification.**” [emphasis added].

With respect to the argument concerning serious burden, the number of distinct species places a serious burden on the examiner.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 2-5, 7-10, and 12-15 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 5.

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hara United States Patent No. 5,202,655 (cited by the applicant) in view of Millman Microelectronics textbook.

The Hara reference discloses in figure 2 an active inductor including a first FET 15 and a second FET 14. The gate of the first FET 15 is connected to the drain of FET 14. Transistors 44 and 16 supply a feedback path. Two ports are formed by the gate and source of FET 14. However, the reference shows the source of FET 15 connected to the source of FET 14 and not the drain of FET 15 connected to the source of FET 14.

Nevertheless, the Millman reference teaches on page 237, 2<sup>nd</sup> full paragraph, that a FET is a symmetrical device and either end may of the channel be used as the source.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have switched the source and drain of FET 15 in the active inductor circuit of Hara as taught by Millman because such a modification would have been considered a mere reversal of parts as suggested by Millman.

5. Claims 1, 6, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ko et al. monograph entitled "Low Power, tunable active inductor and its applications ..." in view of Millman.

The Ko et al. reference discloses in figure 1 an active inductor that includes a first FET 3 and a second FET 1 wherein the gate of FET 3 is directly connected to drain of FET 2 and a feedback resistor  $R_{FB}$  is shown connected between FET 1 and FET 3. However, the reference shows the source of FET 3 connected to the source of FET 1 and not the drain of FET 3 connected to the source of FET 1.

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Nevertheless, as noted in the Millman reference an FET is bi-directional and either end may be considered the source or drain.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have switched the source and drain of FET 3 in the active inductor circuit of Ko et al. as taught by Millman for the same reasons as noted above.

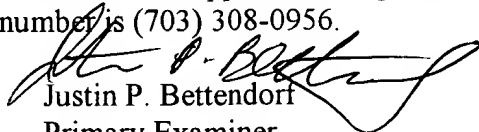
Furthermore, the Ko et al. reference shows a bias port but does shows only one the impedance ports (i.e. ground port connected to the source of FET 1). Nevertheless, one of ordinary skill in the art would have recognized that the left-most amplifier CS forms the port for the active inductor, which also includes the gate of the second FET 2.

With respect to utilizing a FET with the gate-to-drain tied together as the feedback resistor (as recited in claim 6), such a modification would have been considered an obvious substitution of art-recognized equivalent resistance means that would have advantageously reduced integrated circuit size as taught by Millman reference on page 254, figure 8-14.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin P. Bettendorf whose telephone number is (703) 308-2780. The examiner can normally be reached on 6:00-3:30 (M-F, 1st Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

  
Justin P. Bettendorf  
Primary Examiner  
Art Unit 2817

jpb  
September 6, 2002